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Introduction Considerations for Understanding the Hormonal Regulation of Maternal Care; Immunological Origins of Pregnancy Disorders; Brain Areas Implicated in Control of Male Sexual Behavior; Chapter 6. Preimplantation Embryo Development and Primordial Germ Cell Lineage Specification; Introduction; Sensory Control of Maternal Care; Other Epigenetic Mechanisms; Brain Control of Maternal Behaviors; Regenerative Potential of Spermatogonial Stem Cells and Translation to the Clinic; Chapter 7. Sex Determination and Differentiation; Introduction; Hormones Most Significant for Paternal Behaviors Effects of Systemically or Intracerebroventricularly Administered Drugs Section II. Gonadal Steroids, Pituitary and Hypothalamus; Chapter 8. Human Steroid Biosynthesis; Introduction; General Concepts; The Conversion of Cholesterol to Pregnenolone and Mitochondrial Steroid Metabolism; Steroid Hydroxylation and the Microsomal P450 Enzymes; HSDs, the Terminal Steps, and Peripheral Metabolism; Steroid Sulfonation; Steroid Degradation and Excretion; Pathways; Comparison with Other Species; Conclusion; Chapter 9. Gonadal Steroid Action; Introduction; Transcriptional Actions of Gonadal Steroids Nontranscriptional Effectors of Gonadal Steroids Steroid Signaling via Membrane Receptors; Coregulators and Gonadal Steroid Physiology; Informatic Approaches and Transcriptional Regulation by Gonadal Steroids; Conclusion; Chapter 10. Gonadotropes and Gonadotropin-Releasing Hormone Signaling; Introduction; Areas of Emerging Interest; Chapter 11. Physiology of the Adult Gonadotropin-Releasing Hormone Neuronal Network; Introduction; Activation of Male Sexual Behavior by Gonadal Hormones; Male Reproductive Aging; Regulation of the Adult Prostate; Conclusion; Conclusion Chapter 12. Hypothalamic Control of Prolactin Secretion, and the Multiple Reproductive Functions of Prolactin

Sommario/riassunto

The Fourth Edition of Knobil & Neill continues to serve as a reference aid for research, to provide the historical context to current research, and most importantly as an aid for graduate teaching on a broad range of topics in human and comparative reproduction. In the decade since the publication of the last edition, the study of reproductive physiology has undergone monumental changes. Chief among these advances are in the areas of stem cell development, signaling pathways, the role of inflammation in the regulatory processes in the various tissues, and the integration of new animal models
